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10/021,205	12/07/2001	Philip P. Carvey	2390.1006-009	9706

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EXAMINER

LEE, ANDREW CHUNG CHEUNG

ART UNIT	PAPER NUMBER
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2619

MAIL DATE	DELIVERY MODE
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01/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/021,205

Applicant(s)

CARVEY ET AL.

Examiner

Andrew C. Lee

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/ are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 3, 5, 7, 10 are pending.

Claims 2, 4, 6, 8, 9, 11, 12, 13, 14 had been canceled.

Claim Objections

2. Claim 10 is objected to because of the following informalities:

The indefinite article "A" should be changed to the definite article "The".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 5, 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 1, the exact meaning for the amended phrase "the load approaching balance across the trunks" (line 9) is very ambiguous. Regarding claim 3, the exact meaning for the amended phrase "for a load to approach balance across the trunks" (lines 9 – 10) is very ambiguous. Regarding claims 5, and 7, the same discrepancies were addressed previous in claims 1 and 3.

Examiner has difficulty to figure out what it means by "load approaching balance" and "a load to approach balance"? When the load is approaching balance and when the

load is not approaching balance? Where in the specification supports the modified claimed subjects not defined clearly?

Claim 5 recites the limitation "the destination" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the network" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. (6233245 B1) in view of Maciel et al. (6112248).

Regarding claim 1, Chapman et al. disclose a network router to route Internet Protocol (IP) data packets ("the routers receives from an input port data traffic units, such as IP data packets to be transmitted to a certain output port" correlates to a network router to route Internet Protocol (IP) data packets; Fig. 4, Fig. 5, col. 2, lines 27

– 33) comprising: a plurality of trunk ports, including a composite port of plural ports to plurality trunks which serve as a composite trunk to a common destination (“physical links 362, 364 and 366” interpreted as a plurality of trunk ports; Fig. 3, col. 4, lines 45 – 52); a routing fabric configured to transfer the IP data packets between trunk ports (“the processor/controller is a CPU that executes instructions stored in the memory so as to perform the data routing” interpreted as packet switching fabric” interpreted as a routing fabric configured to transfer the IP data packets between trunk ports; Fig. 3, col. 4, lines 56 - 67); and an output port selector configured to use a destination IP address of the IP data packets to selects an output port for the IP packet from a composite port (“the address filed in an IP data packet indicates the destination of the data packet” interpreted as an output port selector configured to use a destination IP address of the IP data packets to selects an output port for the IP packet from a composite port; Fig. 3, col. 2, lines 29 - 38),

Chapman et al. do not disclose balancing load across the trunks of the composite trunk according to dynamically adjustable weighting, the load approaching balance across the trunks.

Maciel et al. teach balancing load across the trunks of the composite trunk according to dynamically adjustable weighting, the load approaching balance across the trunks (“the process is periodically repeat to provide dynamic load balancing”; Fig. 9, col. 6, lines 40 – 59; col. 7, lines 33 – 41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Chapman et al. to include the

features of balancing load across the trunks of the composite trunk according to dynamically adjustable weighting, the load approaching balance across the trunks as taught by Maciel et al. in order to provide interconnection among data networks and more specifically to traffic load balancing, for instance, among multiple routers or among multiple interfaces in a parallel processing system (as suggested by Maciel et al., see col. 1, lines 7 – 10).

Regarding claim 5, Chapman et al. disclose a method of routing Internet Protocol (IP) data packets in a network router ("the routers receives from an input port data traffic units, such as IP data packets to be transmitted to a certain output port" correlates to a network router to route Internet Protocol (IP) data packets; Fig. 4, Fig. 5, col. 2, lines 27 – 33) comprising: identifying a destination of the IP data packets ("the routing decision is taken by reading a routing table that determines the best way for packet to reach its destination" correlates to identifying a destination of the IP data packets; col. 2, lines 29 – 38); selecting one of plurality trunks forming a composite trunk to the destination based on a destination IP address of the IP data packet ("the address filed in an IP data packet indicates the destination of the data packet" interpreted as selecting one of plurality trunks forming a composite trunk to the destination based on a destination IP address of the IP data packet; Fig. 3, col. 2, lines 29 - 38), forwarding the IP data packets toward the destination on the selected trunk (col. 5, lines 1 – 11).

Chapman et al. do not disclose the trunk being selected with dynamically adjustable weighting to balance load across the trunk of a composite trunk, the load approaching balance across the trunks.

Maciel et al. teach the trunk being selected with dynamically adjustable weighting to balance load across the trunk of a composite trunk, the load approaching balance across the trunks ("the process is periodically repeat to provide dynamic load balancing"; Fig. 9, col. 6, lines 40 – 59; col. 7, lines 33 – 41).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Chapman et al. to include the features of the trunk being selected with dynamically adjustable weighting to balance load across the trunk of a composite trunk, the load approaching balance across the trunks as taught by Maciel et al. in order to provide interconnection among data networks and more specifically to traffic load balancing, for instance, among multiple routers or among multiple interfaces in a parallel processing system (as suggested by Maciel et al., see col. 1, lines 7 – 10).

Regarding claim 10, Chapman et al. disclose the method as claimed wherein the network is the Internet and the packets are routed under an Internet protocol ("Internet TCP/IP protocol" and "WWW traffic"; Fig 1, col. 1, lines 34 – 38, col. 2, lines 27 – 38).

6. Claims 3, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Chapman et al. (6233245 B1) in view of Pascucci et al. (5598566, related art).

Regarding claim 3, Chapman et al. disclose a network router to route Internet Protocol (IP) data packets ("the routers receives from an input port data traffic units, such as IP data packets to be transmitted to a certain output port" correlates to a network router to route Internet Protocol (IP) data packets; Fig. 4, Fig. 5, col. 2, lines 27 – 33) comprising: a plurality of trunk ports, including a composite port of plural ports to plural trunks which serve as a composite trunk to a common destination ("physical links 362, 364 and 366" interpreted as a plurality of trunk ports; Fig. 3, col. 4, lines 45 – 52); a routing fabric configured to transfer the IP data packets between trunk ports (the processor/controller is a CPU that executes instructions stored in the memory so as to perform the data routing" interpreted as packet switching fabric" interpreted as a routing fabric configured to transfer the IP data packets between trunk ports; Fig. 3, col. 4, lines 56 - 67); and an output port selector configured to use a destination IP address of the IP data packets to selects an output port for the IP packet from the composite port according to a table (the address filed in an IP data packet indicates the destination of the data packet" interpreted as an output port selector configured to use a destination IP address of the IP data packets to selects an output port for the IP packet from a composite port; Fig. 3, col. 2, lines 29 – 38, col. 7, lines 46 – 61).

Chapman et al. do not disclose the table routes being dynamically adjustable for a load to approach balance across the trunks.

Pascucci et al. disclose the table routes being dynamically adjustable for a load to approach balance across the trunks ("reconfiguring routing tables in response to changed conditions, dynamically adjusting routing tables"; interpreted as the table routes being dynamically adjustable for a load to approach balance across the trunks; col. 5, lines 16 – 40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Chapman et al. to include the features of the table routes being dynamically adjustable for a load to approach balance across the trunks as taught by Pascucci et al. in order to provide dynamic or adaptive routing strategies route messages over communications links in response to message traffic and topology (as suggested by Pascucci et al., see col. 5, lines 16 – 18).

Regarding claim 7, Chapman et al. disclose a method of routing Internet Protocol (IP) data packets in a network ((("the routers receives from an input port data traffic units, such as IP data packets to be transmitted to a certain output port" correlates to a network router to route Internet Protocol (IP) data packets; Fig. 4, Fig. 5, col. 2, lines 27 – 33) comprising: identifying a destination of the IP data packets (the routing decision is taken by reading a routing table that determines the best way for packet to reach its destination" correlates to identifying a destination of the IP data packets; col. 2, lines 29 – 38); selecting one of plural trunks forming a composite trunk to the destination based on a destination IP address of the IP data packets, the trunk being selected according

to a table ("the address filed in an IP data packet indicates the destination of the data packet" interpreted as selecting one of plurality trunks forming a composite trunk to the destination based on a destination IP address of the IP data packet, the trunk being selected according to a table; Fig. 3, col. 2, lines 29 - 38, col. 7, lines 46 - 61), forwarding the IP data packets toward the destination on the selected trunk (col. 5, lines 1 - 11).

Chapman et al. do not disclose the table routes being dynamically adjustable for a load to approach balance across the trunks.

Pascucci et al. disclose the table routes being dynamically adjustable for a load to approach balance across the trunks ("reconfiguring routing tables in response to changed conditions, dynamically adjusting routing tables"; interpreted as the table routes being dynamically adjustable for a load to approach balance across the trunks; col. 5, lines 16 - 40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Chapman et al. to include the features of the table routes being dynamically adjustable for a load to approach balance across the trunks as taught by Pascucci et al. in order to provide dynamic or adaptive routing strategies route messages over communications links in response to message traffic and topology (as suggested by Pascucci et al., see col. 5, lines 16 - 18).

Response to Arguments

7. Applicant's arguments filed on 12/14/2007 with respect to claim 1, 3, 5, 7, 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Tsuchiya et al. (5115495) disclose apparatus and method for routing messages in a communications network having a plurality of communications stations interconnected by a plurality of communication links, and having at least one destination station.
- b) Bernstein et al. (5155594) disclose a method and apparatus for transmitting a sequence of image frames by encoding interframe error data features the steps of compiling a spatially decomposed image of a background of the sequence of image frames, spatially decomposing a warped image of a previous frame, and spatially decomposing a new input image.
- c) Meier (5748619) discloses data communication network for providing dynamic routing through both wireless and wired subnetworks to support wireless communication devices and wired remote stations.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-

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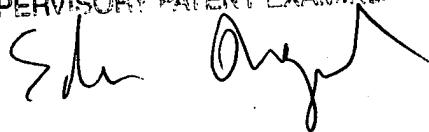
3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C. Lee/:<1/18/2007>

EDAN . ORGAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Edan Orgad', is written over the printed name and title.